

# Material Safety Data Sheet

Information Required for Substances for Use at Work (C.O.S.H.H.)



## 1. Trade Name & Product Information

**Supplier:** Hayes UK Limited  
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West Sussex, England, RH14 9RZ.  
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**Product Name(s):** Code 88.5000 ICEMAN Pro-Freeze Pipe Freezer Gas

## 2. Composition Information

| Ingredients                 | CAS No.  | Hazard/Risk Codes    | Weight/Conc. |
|-----------------------------|----------|----------------------|--------------|
| 1,1,1,2 - Tetrafluoroethane | 811-97-2 | S9, S23, S24/25, S41 | 100%         |

Composition Comments:

## 3 - Hazards Identification

|                                 |   |
|---------------------------------|---|
| Adverse human health effects    | Contains a liquefied gas. Contact of liquid may cause frostbite and injury to the cornea.               |
| Main symptoms                   | May have a narcotic effect at high concentrations   |
| Physical and Chemical Hazards   | Heating will cause a rise in pressure with a risk of bursting. On combustion, toxic gases are released. |
| Classification/Specific Hazards | According to EEC criteria, this product is not classified as a hazardous substance.                     |

## 4 - First Aid Measures

|                        |   |
|------------------------|---|
| Inhalation             | Move the affected person away from the contaminated area and into the fresh air<br>Make the affected person rest.<br>If breathing stops, give artificial respiration.<br>Call a doctor immediately.   |
| Skin contact           | Contact of liquid with the skin:<br>Rinse immediately with plenty of warm water.<br>Immediately remove contaminated clothing or footwear.<br>If it stick do not pull it off.<br>Cover the affected area with a sterile dressing.<br>Transfer to hospital immediately. |
| Eye contact            | Contact of liquid with the eyes:<br>Rinse with water whilst keeping the eyes wide open.<br>Consult an eye specialist immediately  |
| Ingestion              | Not specifically applicable   |
| Notes to the physician | Avoid administering adrenaline or any other similar products  |

## 5 - Fire Fighting Measures

|                                |   |
|--------------------------------|---|
| Extinguishing Media            | Use extinguishing media appropriate for surrounding fire  |
| Specific hazards               | Pressurized container. On heating there is a risk of bursting due to internal pressure build-up.<br>NOT flammable, however it may present a risk in the event of fire.<br>Toxic vapours (halogen compounds) are released. |
| Specific fire fighting methods | Stay upwind.<br>Evacuate the personnel away from the fumes.<br>Cool down the containers exposed to heat with a water spray  |
| Protection of fire fighters    | Self-contained breathing apparatus  |

## 6 - Accidental Release Measures

|                            |  |
|----------------------------|--|
| Personal precautions       | Avoid contact with the skin and eyes.<br>Do not breathe gas.<br>NO naked flames.<br>Do NOT smoke.<br>For further information refer to section 8 "Exposure controls /Personal protection."<br>heavy vapours, shut off low level openings in the vicinity (ventilation shafts, drains)<br>Prevent the product from entering cellars, basements or pits<br>Ventilate spillage areas<br>Ventilate basements. |
| Environmental precautions  | Prevent the product from spreading into the environment  |
| Methods for cleaning up    |  |
| - Recovery                 | Recover as much of the product as possible   |
| - Cleaning/Decontamination | Allow residual product to evaporate.   |
| - Disposal                 | For disposal of contaminated materials refer to Section 13: "Disposal Considerations".   |

## 7 - Handling & Storage

### HANDLING

|          |  |
|----------|--|
| Measures | Avoid contact with hot surfaces<br>Avoid high temperatures<br>Smoking is forbidden |
|----------|--|

### STORAGE

|                       |  |
|-----------------------|--|
| Technical Measures    | Storage facilities should be: <ul style="list-style-type: none"><li>▪ Equipped with ventilation at low level.</li><li>▪ Take all necessary precautions to avoid the accidental release of the product outside, due to the rupture of containers or transfer systems.</li></ul> |
| Storage conditions    | Keep: <ul style="list-style-type: none"><li>▪ the container dry</li><li>▪ in a cool well ventilated area</li><li>▪ at temperatures not exceeding 45°C</li><li>▪ away from any heat source</li><li>▪ away from any source of ignition</li></ul>                                 |
| Incompatible products | Refer to the detailed list of incompatible materials (section 10 "Stability/Reactivity")   |

## 8 - Exposure controls/Personal protection

|                               |  |
|-------------------------------|--|
| Engineering measures          | Ensure good ventilation whilst working   |
| Control parameters            |  |
| Occupational Exposure limits  |  |
| - Limits (UK)                 | OES: 1000ppm (4200 mg/m <sup>3</sup> ) Long term exposure limit – 8h TWA reference point |
| Personal Protective Equipment |  |
| - Respiratory protection      | In the event of insufficient ventilation:<br>Self contained breathing apparatus          |
| - Hand protection             | Handling re Fridgerated product:<br>Protective gloves insulated against the cold         |

|                            |  |
|----------------------------|--|
| - Eye protection           | Handling re Fridgerated product:<br>Goggles              |
| - Skin and body protection | Handling re Fridgerated product:<br>Impermeable clothing |
| Hygiene measures           | Do NOT drink, eat or smoke in the workplace              |

## 9 - Physical and Chemical Properties

|                      |  |
|----------------------|--|
| Appearance           | Compressed liquefied gas in an aerosol           |
| Odour/Taste          | Characteristic colourless/etherial               |
| Specific Gravity     | Liquid product: 1200kg/m <sup>3</sup> at 25°C    |
| PH-value             | Not applicable                                   |
| Oxidizing properties | Non oxidizing material according to EEC criteria |
| Flash Point          | No Flash point (in test conditions)              |
| Vapour Pressure      | 671 kPa at 25°C                                  |

## 10 - Stability & Reactivity

|                         |   |
|-------------------------|---|
| Stability               | Stable under normal conditions  |
| Materials to Avoid      | Reacts violently with: <ul style="list-style-type: none"> <li>▪ alkali metals</li> <li>▪ alkaline earth metals</li> <li>▪ magnesium</li> <li>▪ powdered metals</li> </ul> |
| Conditions to Avoid     | Heat flames and other sources of ignition   |
| Hazardous Decomposition | Thermal decomposition at high temperatures giving toxic and corrosive products; Hydrogen Fluoride (Hydrofluric Acid), Oxides of Carbon                                    |

## 11 - Toxicological Information

|              |  |
|--------------|--|
| Inhalation   | Vapour: Move to fresh air – use oxygen or artificial respiration if needed, if problems persist seek medical attention |
| Skin contact | Liquid: Injection of liquified gas will cause frost bite.  |
| Eye Contact  | Liquid: Injection of liquified gas will cause frost bite   |
| Ingestion    | Vapour: unlikely to cause irritation to humans.  |

## 12 - Ecological Information

|                                    |   |
|------------------------------------|---|
| Behaviour in the environment -     |   |
| Mobility                           | Product is volatile when in an aqueous solution |
| Persistence/Degradability          | Slightly biodegradeable                         |
| Bioaccumulation                    | Not bioaccumulable                              |
| Destination of the product         | Ultimate destination of the product: AIR        |
| Ecotoxicity -                      |   |
| Effects on the aquatic environment | No information available                        |

### 13 - Disposal Considerations

Disposal methods Do not puncture or cut can until completely purged  
Dispose of in accordance with local authority requirements.

### 14 - Transport Information

Land Rail/Road (RID/ADR) UN number: 1950  
Class: 2

Air (ICAO/IATA) UN number: 1950  
Class: 2.2  
Labelling: 2 Non-flammable Gas

Sea (IMO/IMDG) UN number: 1950  
Class: 2.2  
Labelling: 2 Gaz Comprime Ininflammable  
Marine Pollutant: No

Other Regulations Classification for conveyance: Non-flammable compressed gas  
Emergency action code: 2RE

### 15 - Regulatory Information

|                 |   |
|-----------------|---|
| ECC regulations | Mandatory labeling of hazardous substances not applicable.  |
| - R phrases     | No R phrases.   |
| - S phrases     | S9 – Keep container in a well ventilated place.<br>S2 – Do not breathe the gas.<br>S24/25 – Avoid contact with skin and eyes.<br>S41 – In case of fire and/or explosion do not breathe fumes. |

### 16 - Other Information

Recommended Use This product is usually used for forming iceplugs in heating pipes

Chemical formula C2 H2 F4

Molecular Mass 102.04g

Registration numbers Registered in the TSCA inventory  
Registered in the EINECS inventory

Disclaimer: The above information is based on the our knowledge of the product at the time of publication, it is given I good faith. No warranty is implied with respect to the quality or specification of the product, the user must satisfy themselves that the product is entirely suitable for the purpose intended.